

Appl. No. 10/028,246
Amdt. dated March 21, 2004
Reply to Office Action of January 21, 2004

Page 4

IN THE CLAIMS:

The claims as currently presented and under consideration, are presented below for the Examiner's convenience and to comply with 37 CFR §1.121:

1. [Cancelled]
2. [Currently Amended] An isolated polynucleotide selected from the group consisting of:
 - (a) ~~a nucleic acid sequence which encodes or is complementary to a sequence which encodes an EGVIII polypeptide having at least 85% sequence identity to the amino acid sequence presented in Figure 2 (SEQ ID NO:2);~~
 - (b) ~~a nucleic acid sequence which encodes or is complementary to a sequence which encodes an EGVIII polypeptide having at least 90% sequence identity to the amino acid sequence presented in Figure 2 (SEQ ID NO:2);~~
 - (c) ~~a nucleic acid sequence which encodes or is complementary to a sequence which encodes an EGVIII polypeptide having at least 95% sequence identity to the amino acid sequence presented in Figure 2;~~
 - (ad) a nucleic acid sequence which encodes or is complementary to a sequence which encodes an EGVIII polypeptide having the amino acid sequence presented in Figure 2;
 - (ce) ~~a nucleic acid sequence which encodes or is complementary to a sequence which encodes an EGVIII polypeptide having at least 95% sequence identity to the amino acid sequence presented as SEQ ID NO:2;~~
 - (bf) a nucleic acid sequence which encodes or is complementary to a sequence which encodes an EGVIII polypeptide having the amino acid sequence presented as SEQ ID NO:2;
 - (cg) a nucleic acid sequence presented as SEQ ID NO:4, or the complement thereof; and
 - (dh) a nucleic acid sequence that hybridizes, under high stringency conditions to the sequence presented as SEQ ID NO:4, or the complement or a fragment thereof, wherein said isolated polynucleotide encodes a polypeptide having the biological activity of an endoglucanase.

Appl. No. 10/028,245
Amdt. dated March 21, 2004
Reply to Office Action of January 21, 2004

Page 5

3. [Original] The isolated polynucleotide of Claim 2, wherein % identity is calculated using the CLUSTAL-W program in MacVector version 6.5, operated with default parameters, including an open gap penalty of 10.0, an extended gap penalty of 0.1, and a BLOSUM 30 similarity matrix.
4. [Original] The isolated polynucleotide of Claim 2, wherein hybridization is conducted at 42°C in 50% formamide, 6X SSC, 5X Denhardt's solution, 0.5% SDS and 100 µg/ml denatured carrier DNA followed by washing two times in 2X SSPE and 0.5% SDS at room temperature and two additional times in 0.1 SSPE and 0.5% SDS at 42°C.
5. [Original] The isolated polynucleotide of Claim 2, wherein said polynucleotide is an RNA molecule.
6. [Previously Amended] The isolated polynucleotide of claim 1 encoding an enzyme having endoglucanase activity, wherein the enzyme is isolated from a *Trichoderma* source.
7. [Previously Amended] The isolated polynucleotide of Claim 6, wherein the enzyme is isolated from *Trichoderma reesei*.
8. [Previously Amended] An expression construct comprising a polynucleotide sequence encoding an amino acid sequence having endoglucanase activity and (i) having at least 85% sequence identity to the amino acid sequence presented in SEQ ID NO:2, or (ii) being capable of hybridizing to a probe designed to hybridize with the nucleotide sequence disclosed in Figure 1 under conditions of intermediate to high stringency, or (iii) being complementary to a nucleotide sequence having at least 85% sequence identity to a nucleotide sequence encoding the amino acid sequence presented in SEQ ID NO:2.
9. [Previously Amended] A vector comprising the expression construct of Claim 8.
10. [Original] A vector comprising an isolated polynucleotide of Claim 2, operably linked to control sequences recognized by a host cell transformed with the vector.
11. [Original] A host cell transformed with the vector of Claim 9.
12. [Original] A host cell transformed with the vector of Claim 10.
13. [Original] The host cell of Claim 12, which is a prokaryotic cell.
14. [Original] The host cell of Claim 12, which is a eukaryotic cell.

Appl. No. 10/028,245
Amdt. dated March 21, 2004
Reply to Office Action of January 21, 2004

Page 6

15. [Original] A recombinant host cell comprising a polynucleotide of Claim 2.
16. [Original] The recombinant host cell of Claim 15, which is a prokaryotic cell.
17. [Original] The recombinant host cell of Claim 15, which is a eukaryotic cell.
18. [Cancelled]
19. [Original] A method of producing an enzyme having endoglucanase activity, comprising:
 - stably transforming a host cell with an expression vector comprising a polynucleotide as defined in Claim 2;
 - cultivating said transformed host cell under condition suitable for said host cell to produce said endoglucanase; and
 - recovering said endoglucanase.
20. [Original] The method of Claim 19 wherein the host cell is a filamentous fungi or yeast cell.
21. [Cancelled]
22. [Currently Amended] A recombinant host cell comprising a deletion or insertion or other alteration in the *egl8* gene comprising a polynucleotide according to Figure 1 which inactivates the gene and prevents EGVIII polypeptide production.
23. [Previously Amended] An antisense oligonucleotide complementary to a messenger RNA that encodes an EGVIII polypeptide having the sequence presented as SEQ ID NO:2, wherein upon exposure to a endoglucanase-producing host cell, said oligonucleotide inhibits the production of endoglucanase by said host cell.
24. [Original] The antisense oligonucleotide of Claim 23, wherein the host cell is a filamentous fungi.
25. [Cancelled]
26. [Currently Amended] A method of expressing a heterologous polypeptide having endoglucanase activity in an *Aspergillus* species, comprising:
 - Providing a host *Aspergillus* with an expression vector comprising a polynucleotide encoding a signal sequence linked to a polynucleotide comprising SEQ ID NO:4 encoding a heterologous endoglucanase EG VIII, thereby encoding a chimeric polypeptide;

Appl. No. 10/028,245
Amdt. dated March 21, 2004
Reply to Office Action of January 21, 2004

Page 7

Cultivating said host *Aspergillus* under conditions suitable for said *Aspergillus* to produce said chimeric polypeptide, wherein said chimeric polypeptide is produced.

27 – 36. [Cancelled]